

# Force Health Protection

*Tying Gulf War Lessons To Policies For The Future*



R. Adm. Michael L. Cowan, deputy director for medical readiness, the Joint Staff

***We are being proactive in identifying, avoiding, and managing risks. When we put forces in the battlefield, we should not subject them to risks we can do something about.***

**W**e all know what it's like to learn a lesson. Out of the tough act of confronting and resolving problems, we gain wisdom. It can happen in the workplace, with a loved one, or on the battlefield. Often the experience prompts change.

Governments learn lessons too. Criticized for its failure to protect the health of US troops during the Gulf War and its initially slow response to the complaints of Gulf War veterans, the Department of Defense has adopted a comprehensive, proactive strategy of force health protection for servicemen and women throughout their military service.

"As a result of the Gulf War, many veterans lost faith in our medical system. We have completely reconfigured how we respond," said R. Adm. Michael L. Cowan, deputy director for medical readiness, the Joint Staff. "We are being proactive in identifying, avoiding, and managing risks. When we put forces in the battlefield, we should not subject them to risks we can do something about."

Using the lessons learned from the Gulf War, the conceptual framework includes overall force protection, health surveillance, environmental monitoring, and appropriate casualty management throughout a service member's entire career. "We need to understand that health is not just the absence of disease, it is the complete state of mental, physical, spiritual, and social well-being. That's what we are after," Cowan said.

The desired outcome is a healthy and fit force, fully protected from health hazards throughout the military operational cycle.

When we look at history, we see that we did things sporadically, Cowan said, "and they weren't always documented. While we did a lot of things right, we didn't do them in an organized way."

Examining Gulf War history is the mission of Dr. Bernard Rostker, special assistant to the deputy secretary of defense for Gulf War illnesses. Appointed in November 1996, Rostker's responsibility is to investigate what happened before, during, and after the Gulf War and consider how incidents and practices relate to the potential causes of Gulf War illnesses. His 180-person team of active-duty service members, veterans, and technical specialists is engaged in an extensive outreach effort to veterans, a comprehensive investigation of the events of the war, and a thorough examination of Gulf War operations to see that DoD learns from the Gulf War experience and makes required policy changes.

## SLOW RESPONSE

From an operational perspective, the Gulf War was a dramatic success. From a medical perspective, although casualty rates were low, unanswered questions remain. Some of the 697,000 veterans who served in the war were left with often-debilitating health problems. The Department of Defense's slow response to their questions led to a loss of its credibility. Mending the atmosphere of mistrust and documenting the facts, wherever they may lead, is a challenge Rostker shares with the assistant secretary of defense (health affairs), the joint staff, and officials from all of the services.

"Even though the causes of Gulf War illnesses remain largely unexplained, the men and women who served in the Gulf want and deserve to know what happened in the Gulf," Rostker said at a recent Pentagon press briefing.

Force health protection initiatives also involve a shift in mind-set and military culture. Capt. Michael Kilpatrick, Rostker's medical advisor and director of his medical and health benefits collaboration team, described the change in focus.

"During the Gulf War and before, health care was the responsibility of the medical people, and that had to be fit around all the obligations of the operational tempo of the military. Today, those operational leaders factor health care as one of their responsibilities along with all operational requirements, so medical concerns have a priority position in all the planning," Kilpatrick said.

Department wide support exists for the initiatives. The office of the assistant secretary of defense (health affairs) took the lead on the team effort. The offices of the chairman, the joint chiefs of staff, joint staff directors, and commanders-in-chief all are involved in ongoing decision briefings and special information updates.

"Many lessons have been learned, many lessons need to be applied," said Gary A. Christopherson, principal deputy assistant secretary of defense (health affairs) during a hearing before the Senate Committee on Veterans' Affairs in March 1998.

## NEW STRATEGY

In order to implement the new strategy, joint publications are being revised to accommodate the changes required to improve health assessments, medical and environmental surveillance, and medical record-keeping during all military deployments, said health officials.



Many measures were put in place in Bosnia and during the recent deployment of forces to Southwest Asia. Health officials believe that medical surveillance practices advanced in Bosnia as part of the integrated force-protection model are responsible for the lowest disease and non-battle injury rate in history for a deployed US force. In Bosnia, for example, there were 76 cases per 1,000 service members per year, compared to a rate of 153 cases per 1,000 service members per year deployed to Operations Desert Shield and Desert Storm and 419 cases per 1,000 service members per year deployed during the Vietnam conflict.

Health officials explained how various new requirements have been implemented into routine operations and policy.

Pre-deployment steps include: a medical threat briefing; distribution of medical information; verification that a DNA sample is on file; demonstration that a pre-deployment blood sample is either on file or has been drawn; verification that an HIV test has been done within 12 months prior to deployment; administration of required immunizations; conducting a physical exam, if one has not been completed, when required; completion of a pre-deployment health questionnaire; and follow-up actions for conditions that may affect the service member's health during deployment.

Initiatives during deployment include: daily and weekly disease and non-battle injury reporting; environmental monitoring of air, water, and soil for actual or potential health threats; oversight of individual and unit preventive measures; immunization tracking, with an enhanced focus on the anthrax vaccine; medical threat update briefings; and the employment of forward medical laboratories and joint medical surveillance teams to facilitate health surveillance efforts.

Post-deployment measures designed to identify and care for the health needs of returning service members include: post-deployment health questionnaires; medical debriefs; screening exams; post-deployment blood samples, as required; and an analysis of "lessons learned."

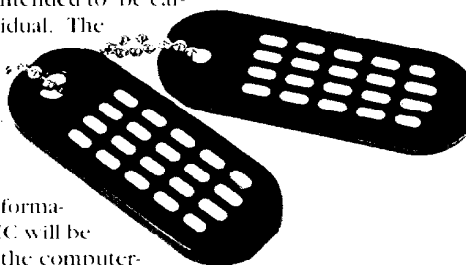
Many of these policies build on previous preventive medicine practices that were implemented in varying degrees during the Gulf War. However, they were neither standardized nor centralized among deployed forces, said Kilpatrick, who served as commanding officer of the Naval Medical Research Unit Three in Cairo, Egypt, and oversaw the deployment of the Navy Forward Lab in support of Operations Desert Shield and Desert Storm in 1990 and 1991. Since the Gulf War, the Navy Forward Laboratory and the Army's Theater Area Medical Laboratory have been used more extensively in several major deployments. They contain the diagnostic capability to analyze the environment for any biological or chemical health threat to assure that troops are not put in medical harm's way.

Principles contained in the National Military Strategy and Joint Vision 2010 are also driving changes to force health protection. Joint Vision 2010 recognizes the manner in which emerging technologies will influence effective joint warfighting capabilities in the future and calls for a healthy and fit force to

exploit technology to control the battlefield, Cowan said. "Information superiority will allow us to talk to our units and communicate far better than any enemy can anticipate. That means we will expend fewer weapons and leave fewer people at risk. US forces will no longer depend on a battlefield with great tent cities and a 17-acre field hospital."

## PIC

Under the auspices of the assistant secretary of defense for health affairs, advancing technologies are the linchpin for maintaining the individual service member's lifelong medical record. Next year, DoD is expected to perform a large-scale operational test of the personal information carrier or "PIC," a small, tag-like device intended to be carried by an individual. The PIC will be capable of storing as much as 10,000 pages of medical, X-ray, and vaccination information. Information from the PIC will be downloaded to the computerized patient record system and updated by medical personnel whenever service members are examined or treated.



A Theater Medical Information Program, part of an overall Global Command Support System, is also being developed to improve and maintain documentation of the operational health status of soldiers, sailors, airmen, and Marines across the entire continuum of health care.

## RECORD-KEEPING

The Pentagon's ability to locate and document many Gulf War medical records was called into question after the war. Approximately 130,000 of the 700,000 personnel in the Gulf were immunized with the anthrax vaccine during the war. Troops received shots, labeled "A," with little or no explanation. Unfortunately, when immunizations were not recorded, "it gave the impression of dishonesty," said Kilpatrick.

Determined not to repeat that mistake, Secretary Cohen directed the establishment of a reliable, automated tracking program as a prerequisite in the recent decision to vaccinate US military personnel deployed to the Gulf region against the biological warfare agent anthrax. Surgeon General of the Army Lt. Gen. Ronald Blanck explained during a special Pentagon briefing how the automated tracking system would work.

"When a member is immunized, the immunization is entered and stored centrally in the DEERS [Defense Enrollment Eligibility Reporting System] that maintains all of the service records." The system is so sophisticated, Blanck said, that a Marine temporarily detailed to an Army clinic in Kuwait could receive an immunization that would be entered into DEERS via the Army's MEDPROS software program. That information could then be retrieved from DEERS and entered into the Navy's internal immunization tracking system.

Secretary Cohen also required the approval of operational and communication plans before vaccinations



Dr. Bernard Rostker, special assistant to the deputy secretary of defense for Gulf War illnesses

***Even though the cause of Gulf War illnesses remains largely unexplained, the men and women who served in the Gulf want and deserve to know what happened in the Gulf.***



**Capt. Michael Kilpatrick,**  
Rostker's medical advisor  
and director of his  
medical and health benefits  
collaboration team

***During the Gulf War and before, health care was the responsibility of the medical people, and that had to be fit around all the obligations of the operational tempo of the military.***

***Today, those operational leaders factor medical as one of their responsibilities along with all operational requirements, so medical has its priority position in all the planning.***

could begin. The Department held numerous medical briefings and developed a tri-fold information brochure for troops before deployment. R. Adm. Cowan displayed the brochure when briefing Senate Veterans' Affairs Committee members in March. "This goes in the hand before the needle goes in the [service member's] arm," he told them.

#### FEEDBACK

Opening up channels of communication with veterans who served in the Gulf War is critical to unearthing events and situations encountered during that conflict. "We have already spoken to more than 8,000 veterans and have received more than 4,000 e-mail messages," said Rostker, explaining that if he can't answer their questions, he doesn't feel that the effort is complete.

Once Rostker's staff has accumulated all anecdotal, documentary, and physical evidence and analyzed results concerning a particular issue, event, or incident, information papers and case narratives—16, thus far—are released to the public. The broad range of issues being examined include: the M8A1 alarm; use of chemical protective equipment and clothing; Fox vehicles; reported detections of chemical agents; environmental exposures and possible exposures of US troops to chemical agents during the war; vaccine administration; pyridostigmine bromide; and a review of theater-wide policy relating to health care delivery during the war.

In examining the use of the mission-oriented protective posture procedures during the Gulf War, Rostker's information paper concluded that the primary weakness of increased protective posture was that the weight and bulk of the equipment degraded combat performance and made even simple tasks onerous.

As a result of the Gulf War experience, the Joint Service Lightweight Integrated Suit Technology is being developed for all services. It is a lighter, less bulky suit that will lessen mobility problems.

The report published on the performance of the more than 12,000 M8A1 alarms during the Gulf War explains that many of the normal chemical compounds used in the military environment, such as burning fuel or diesel gasoline exhaust, can cause the system to signal a false alarm. During the Gulf War many

false alarms sounded as a result of a low battery, oily smoke, or blowing sand.

Based on commanders' observations that the alarm was subject to this problem, improvements will be incorporated into the M22 Automatic Chemical Agent Detector (ACADA) Alarm, which is replacing the M8A1. Initial fielding of the ACADA to the US Army Chemical School at Ft. McClellan, AL took place in July.

The use of approximately 60 Fox Nuclear, Biological, and Chemical Reconnaissance Vehicles during the Gulf War to detect Iraqi use of chemical warfare agents has become the subject of important inquiries in a number of Gulf War incidents. Rostker's investigators determined how the vehicle could generate a false alarm or a false positive reading, often resulting in troops' indiscriminate response to alerts.

Additionally, since there were no policy requirements to print out permanent records of the chemical analyses, evidence essential to reconstructing potential chemical incidents involving the Fox vehicle was lacking. Investigators have suggested that data, whether printed on paper or saved electronically, be documented and treated as essential historical evidence. Planned improvements to the Fox vehicle include the installation of Global Positioning System satellite receiver and the addition of the M-21 stand-off chemical detector.

Documentation and communication are pervasive themes in many of the cases. That is a key lesson learned in the so-called Kuwait Girls' School narrative, a case involving the reported positive detection of mustard agent in a tank outside a school in Kuwait by a Fox vehicle after the war. Working with the United Kingdom, investigators concluded in July 1997 that the alleged mustard agent was red fuming nitric acid.

Rostker described the conflicting findings and their implication for lessons learned during a speech before a meeting of the United States Army Chemical Corps at the Worldwide Chemical Conference at Fort McClellan, AL in June 1998. Many individuals and organizations had contact with the tank, he said, however, they did not always communicate with one another. Reporting to command elements rather than to the specific individuals involved did not always provide the desired closure.

"We have to develop a new mind-set and a new doctrine," Rostker told the group. He emphasized that "any suspected chemical or biological attack, [or other contact, regardless of whether its indications are positive,] must be fully documented."

Much of the controversy associated with Gulf War illnesses is related to the possible linkages among environmental, chemical, and biological exposures and reported illnesses. Under the leadership of Dr. Sue Bailey, assistant secretary of defense (health affairs), the lessons learned since the Gulf War will continue to drive changes in force health protection in the areas of policy and doctrine, equipment, training, and medical issues.

"The Department of Defense has embarked on an aggressive campaign to develop and implement a force health protection strategy for sustaining and preserving the health of the forces," Dr. Bailey emphasized.

The effort is far-reaching and comprehensive. A marriage of the past with the future remains a work in progress. ■

